California Regional Water Quality Control Board
North Coast Region

MONITORING AND REPORTING PROGRAM NO. R1-2000-54

FOR

IN-SITU PILOT STUDY FOR THE CHEMICAL REDUCTION OF CHROMIUM

WILLITS ENVIRONMENTAL REMEDIATION TRUST
Former Remco Hydraulics Facility
934 South Main Street
Willits, California

Mendocino County

MONITORING

A. Groundwater

Groundwater samples shall be collected from Monitoring Wells W-7, MW-21A, MW-22A, MW-24A, MW-32A and the thirteen temporary monitoring wells (TW-1 through TW-13) as described in the May 22, 2000 revised Work Plan for Pilot Testing of In-Situ Reduction of Chromium (Work Plan). There shall be one pre-pilot test and four post-pilot test monitoring events in accordance to the following schedule:

• Pre-Injection Monitoring	Two weeks prior to Injection
• First Post-Injection Monitoring	Two weeks following Injection
• Second Post-Injection Monitoring	Two months following Injection
• Third Post-Injection Monitoring	Four months following Injection
• Fourth Post-Injection Monitoring	Six months following Injection

The samples shall be collected in accordance to the protocol described in Section 5.1, and 5.2 of the Work Plan. Groundwater samples shall be collected and analyzed for the following parameters:

Total Dissolved Chromium, EPA Method 6010
Hexavalent Chromium, EPA Method 7196
Volatile Organic Compounds, EPA Method 8260Chloride, EPA 300.0
Total Petroleum Hydrocarbons as Diesel Fuel, EPA Method 8015 (Modified)
Sulfate, EPA Method 300.0
Sulfide, EPA Method 9030
Nitrate, EPA Method 300.0
Manganese, Calcium, Sodium, Potassium, Iron, EPA Method 200.7
Alkalinity (Carbonate and Bicarbonate), Standard Methods 403
Dissolved Organic Carbon, EPA Method 450.1
Dissolved Methane
Total Dissolved Solids, EPA Method 160.1

Sulfate Reducing Bacteria (Plate Count)
pH
Oxidation-Reduction Potential

B. Stormwater

Each storm drain inlet shall be inspected weekly. If water is present in any portion of the drain inlet, samples shall be collected and analyzed for the following parameters:

Total Dissolved Chromium, EPA Method 6010
Hexavalent Chromium, EPA Method 7196
Volatile Organic Compounds, EPA Method 8260
Chloride, EPA 300.0
Total Petroleum Hydrocarbons as Diesel Fuel, EPA Method 8015 (Modified)
Sulfate, EPA Method 300.0
Sulfide, EPA Method 9030
Nitrate, EPA Method 300.0
Manganese, Calcium, Sodium, Potassium, Iron, EPA Method 200.7
Alkalinity (Carbonate and Bicarbonate), Standard Methods 403

C. Air Monitoring

A Jerome meter shall be used for air monitoring. Air monitoring shall be conducted continuously during the injection of calcium polysulfide within the building, around the perimeter of the building, at Luna's Market and apartment complex, and in the residential neighborhood along Franklin Street, and to the south and west of the facility. Air-borne hydrogen sulfide concentration shall be continuously monitored during the injection of calcium polysulfide within the building, around the perimeter of the building, at Luna's Market and apartment complex, and in the residential neighborhood along Franklin Street, and to the south and west of the facility. If air-borne hydrogen sulfide is not detected during the injection process, the discharger may request, in writing to the Executive Officer, a reduction in the frequency of air monitoring.

REPORTING

The discharger shall submit brief monthly status reports providing air monitoring results, storm water sampling results, work activities and progress, and reporting any issues regarding compliance with waste discharge requirements or changes in implementation of the Work Plan. In addition, three pilot study reports to the Regional Water Board shall be submitted in accordance with the following schedule:

First Report

The first report is due 30 days following the injection of calcium polysulfide and molasses. The report shall include, at a minimum:

a.) Results of the pre-injection baseline monitoring event,

b.) A detailed account of the injection activity, including, but not limited to:
- Field observations, injection locations, etc,
- Quantities of calcium polysulfide and molasses injected at each location, and
- The results of associated physical control parameters measured.

c.) The results of air monitoring, the concentration of air-borne hydrogen sulfide gas, and the analytical results of completed groundwater and storm water monitoring events.

Second Report:

The second report is due six months following the injection of calcium polysulfide and molasses. The report shall contain, at a minimum:

a.) The analytical results of all post-injection monitoring of air, groundwater and storm water,
b.) An interim evaluation of the pilot study.

Third Report:

The third report is due 12 months following the injection of calcium polysulfide and molasses. The report shall contain, at a minimum:

a.) The summary of the results of all air, groundwater and storm water monitoring,
b.) A final evaluation of the pilot study, and the discharger's recommendations on the suitability of the in-situ remedial techniques for the former Remco Hydraulic site.

Ordered by _____

Lee A. Michlin
Executive Officer

July 27, 2000